

【Sequence Listing】

<110> CreaGene Inc.
 <120> Method for Improving a Genetic Stability for the Insert in
 Single-Stranded RNA Virus Recombinant Vectors
 <130> CreaGene-1
 <160> 22
 <170> KopatentIn 1.71
 <210> 1
 <211> 300
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> SIV gag-100

<400> 1
 agcccgagaa cattaaatgc ctgggtaaaa ttgatagagg aaaagaaatt tggagcagaa 60
 gtagtgccag gatttcaggc actgtcagaa ggttgcaccc cctatgacat taatcagatg 120
 ttaaattgtg tgggagacca tcaagcggct atgcagatta tcagagatat tataaacgag 180
 gaggctgcag attgggactt gcagcaccca caaccagctc cacaacaagg acaacttagg 240
 gagccgtcag gatcagatat tgcaggaaca actagttcag tagatgaaca aatccagtgg 300
 300

<210> 2
 <211> 342
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> SIV gag-114

<400> 2
 ccagtacaac aataggtgg taactatgtc cacctgcat taagcccgag aacattaaat 60
 gcctgggtaa aattgataga ggaaaagaaa tttggagcag aagtagtgcc aggatttcag 120
 gcactgtcag aaggttgcac cccctatgac attaatcaga tgtaaattg tgtgggagac 180
 catcaagcgg ctatgcagat tatcagagat attataaacg aggaggctgc agattgggac 240

ttgcagcacc cacaaccagc tccacaacaa ggacaactta gggagccgtc aggatcagat 300
attgcaggaa caactagttc agtagatgaa caaatccagt gg 342

<210> 3
<211> 501
<212> DNA
<213> Artificial Sequence

<220>
<223> SIV p27-167

<400> 3
ccagtacaac aaataggtgg taactatgtc caccigccat taagcccag aacattaaat 60
gcctgggtaa aattgataga ggaaaagaaa ttggagcag aagtagtgcc aggatttcag 120
gcactgtcag aaggttgac cccctatgac attaatcaga tgttaaattg tgtgggagac 180
catcaagcgg ctatgcagat tatcagagat attataaacg aggaggctgc agattgggac 240
ttgcagcacc cacaaccagc tccacaacaa ggacaactta gggagccgtc aggatcagat 300
attgcaggaa caactagttc agtagatgaa caaatccagt ggatgtacag acaacagaac 360
cccataccag taggcaacat ttacaggaga tggatccaac tggggttgca aaaatgtgtc 420
agaatgtata acccaacaaa cattctagat gtaaaacaag ggccaaaaga gccatttcag 480
agctatgtag acaggttcta c 501

<210> 4
<211> 450
<212> DNA
<213> Artificial Sequence

<220>
<223> SIV p27-150

<400> 4
ccagtacaac aaataggtgg taactatgtc caccigccat taagcccag aacattaaat 60
gcctgggtaa aattgataga ggaaaagaaa ttggagcag aagtagtgcc aggatttcag 120
gcactgtcag aaggttgac cccctatgac attaatcaga tgttaaattg tgtgggagac 180
catcaagcgg ctatgcagat tatcagagat attataaacg aggaggctgc agattgggac 240
ttgcagcacc cacaaccagc tccacaacaa ggacaactta gggagccgtc aggatcagat 300

attgcaggaa caactagttc agtagatgaa caaatccagt ggatgtacag acaacagaac 360
 cccataccag taggcaacat ttacaggaga tggatccaac tggggttgca aaaatgtgtc 420
 agaatgtata acccaacaaa cattctagat 450

<210> 5
 <211> 324
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> SIV env-108

<400> 5
 acttctactt ggtttggctt taatggaact agagcagaaa atagaactta tatttactgg 60
 catggtaggg ataataggac tataattagt ttaaataagt attataatct aacaatgaaa 120
 tgtagaagac caggaaataa gacagtttta ccagtcacca ttatgtctgg attggttttc 180
 cactcacaac caatcaatga taggccaaag caggcatggt gttggtttgg aggaaaatgg 240
 aaggatgcaa taaaagaggt gaagcagacc atgtcaaac atcccaggta tactggaact 300
 aacaatactg ataaaatcaa ttig 324

<210> 6
 <211> 294
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> HIV-1 env-98

<400> 6
 ttaaatggca gtctagcaga agaagacata gtaattagat ctgaaaattt cacagacaat 60
 gctaaaacca taatagtaca gctaaatgaa tctgtagtaa ttaattgtac aagacccaac 120
 aacaatacaa gaagaagggt atctatagga ccaggagag cattttatgc aagaagaac 180
 ataataggag atataagaca agcacattgt aacattagta gagcaaatg gaataacact 240
 ttacaacaga tagttataaa attaagagaa aaatttagga ataaaacaat agcc 294

<210> 7
 <211> 249
 <212> DNA

<213> Artificial Sequence

<220>

<223> HIV-1 env-83

<400> 7

ttaaattggca gtctagcaga agaagacata gtaattagat ctgaaaattt cacagacaat	60
gctaaaacca taatagtaca gctaaatgaa tctgtagtaa ttaattgtac aagacccaac	120
aacaatacaa gaagaagggtt atctatagga ccaggagag cattttatgc aagaagaaac	180
ataataggag atataagaca agcacattgt aacattagta gagcaaaatg gaataacact	240
ttacaacag	249

<210> 8

<211> 213

<212> DNA

<213> Artificial Sequence

<220>

<223> HIV-1 env-71

<400> 8

ctaaatgaat ctgtagtaat taattgtaca agacccaaca acaatacaag aagaaggta	60
tctataggac caggagagc attttatgca agaagaaaca taataggaga tataagacaa	120
gcacattgta acattagtag agcaaaatgg aataacactt tacaacagat agttataaaa	180
ttaagagaaa aatttaggaa taaaacaata gcc	213

<210> 9

<211> 294

<212> DNA

<213> Artificial Sequence

<220>

<223> HIV-1 env-98/M

<400> 9

ttaaattggca gtctagcaga agaagacata gtaattagat ctgaaaattt cacagacaat	60
gctaaaacca taatagtaca gctaaatgaa tctgtagtaa ttaattgtac aagaccgaac	120
aacaatacaa gaagaagggtt atctatagga ccaggagag cattttatgc aagaagaaac	180
ataataggag atataagaca agcacattgt aacattagta gagcaaaatg gaataacact	240

ttacaacaga tcgtgatcaa gcttcgggag aagttccgga acaagacgat cgcc 294

<210> 10
 <211> 381
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PV 2-127

<400> 10
 gcgctgacag ccgtagagac agggggccacc aacccattgg tgccttcaga cacggtacaa 60
 actcgtcagc tcattcaaaa gcggacgcgg tcggagtcta cggttgagtc tttcttcgca 120
 agaggagcct gtgtggccat tattgaagtg galaatgatg ctccaacaag gcgtgccagt 180
 aaattatttt cagtcigga gataacttac aaggacaccg ttcagttaag acgtaagttg 240
 gatttcttta catattcaag gtttgacatg gagttcacct ttgtggttac atccaattat 300
 accgatgcaa acaatgggca cgcactgaat caagtttacc agataatgta cataccacct 360
 ggggcaccga tccctggcaa g 381

<210> 11
 <211> 354
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PV 2-118

<400> 11
 gcttgtgtgg ccattattga agtggataat gatgctccaa caaggcgtgc cagtaaatta 60
 ttttcagtct ggaagataac ttacaaggac accgttcagt taagacgtaa gttggagttc 120
 tttacatatt caaggtttga catggagttc acctttgtgg ttacatccaa ttataccgat 180
 gcaaacaatg ggcacgcact gaatcaagtt taccagataa tgtacatacc acctggggca 240
 ccgatccctg gcaagcggaa tgattacaca tggcaaacgt catctaacc atcagtgttt 300
 tacacttacg gggcacctcc agctagaata tcagtgcctt acgtgggcat tgcc 354

<210> 12
 <211> 330

<212> DNA
 <213> Artificial Sequence

<220>
 <223> PV 3-110

<400> 12
 cacgtagtcc aacgacgcag caggtcagag tccacaatag aatcattctt cgcacgcggg 60
 gcgtgcgtcg ctattattga ggtggacaat gaacaaccaa ccaccggggc acagaaacta 120
 ttgcatgt ggcgattac atacaaagat acagtgcagt tgcgccgtaa gttggagttt 180
 ttcacatact ctctgtttga catggaattc accttcgtgg taaccgcaa cticaccaac 240
 gctaataatg ggcatgcact caaccagggtg taccagataa tgtacatccc cccaggggca 300
 cccacaccaa agtcatggga cgactacact 330

<210> 13
 <211> 480
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> HCV core-160

<400> 13
 atgagcacia atcctaaacc tcaaagaaaa accaaaagaa acaccaaccg tcgcccacia 60
 gacgtcaagt tcccgggcgg tggtcagatc gttggtggag ttacctgtt gccgcgcagg 120
 ggccccaggt tgggtgtgcg cgcgactagg aagacttccg agcggtcgca acctcgtgga 180
 aggcgacagc ctatcccaa ggctcgccaa cccgagggtg ggacctgggc tcagccccggg 240
 tacccttggc ccctctatgg caatgagggt ctgggatggg caggatggct cctgtcacc 300
 cgcggtcttc ggctagtgtg gggccccaca gacccccggc gtaggtcgcg taatttgggt 360
 aaggtcatcg atactctcac atgcggcttc gccgacctca tgggtacat tccgtcgtc 420
 ggcgcccccc tagggggcgt tgccagggcc ttggcacatg gtgtccggct tctggaggac 480
 480

<210> 14
 <211> 300
 <212> DNA
 <213> Artificial Sequence

<220>

<223> HCV core-100

<400> 14

atgagcacia atcctaaacc tcaaagaaaa accaaaagaa acaccaaccg tcgcccacia 60
gacgtcaagt tcccgggcgg tggtcagatc gttgggtggag tttacctgtt gccgcgcagg 120
ggccccaggt tgggtgtgcg cgcgactagg aagacttccg agcggtegca acctcgtgga 180
aggcgacagc ctatcccaa ggctcgccaa cccgagggtt ggacctgggc tcagcccggg 240
tacccttggc ccctctatgg caatgagggt ctgggatggg caggatggct cctgtcaccc 300
300

<210> 15

<211> 399

<212> DNA

<213> Artificial Sequence

<220>

<223> PV 2.3-131

<400> 15

gcgctgacag ccgtagagac agggggccacc aaccatttg tgccttcaga cacggtacia 60
actcgtcacg tcatcaaaaa gcggacgcgg tcggagtcta cggttgagtc tttcttcga 120
agaggagctt gtgtggccat tattgaagtg gataatgatg ctccaacaag gcgtgccagt 180
aaattatttt cagtctggaa gataactgaa ttcgagtcca caatagaatc attcttcga 240
cgcggggcgt gcgtcgtat tattgaggtg gacaatgaac aaccaaccac ccgggcacag 300
aaactatttg ccatgtggcg cattacatac aaagatacag tgcagttgcg ccgtaagttg 360
gagtttttca catactctcg ttttgacatg gaattcacc 399

<210> 16

<211> 336

<212> DNA

<213> Artificial Sequence

<220>

<223> PV 2.3-112

<400> 16

gcttgtgtgg ccattattga agtggataat gatgctccaa caaggcgtgc cagtaaatta 60
 ttttcagtct ggaagataac ttacaaggac accgttcagt taagacgtaa gttggagttc 120
 ttacatatt caaggtttga catggagttc acctttgtgg ttacaggatc cgcgtgcgtc 180
 gctattattg aggtggacaa tgaacaacca accacccggg cacagaaact atttgccatg 240
 tggcgcatta catacaaaga tacagtgcag ttgcgccgta agttggagtt tttcacatac 300
 tctcgttttg acatggaatt caccttcgtg gtaacc 336

<210> 17
 <211> 306
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> HBV C.S

<400> 17
 ttgtggttc acatttctg tcttacgttt gggagacaaa ctgttcttga atatttgggt 60
 tcctttggag tgtggattcg cactcctcct gcatatagac caccaaatgc ccctatctta 120
 tcaacacttc cggaaactac tgttggttaga gaattcccag gatcatcaac caccagcacg 180
 ggaccatgca agacttgca agctcctgct caaggaacct ctatgtttcc ctcatgttgc 240
 tgtacaaaac ctacggacgg aaactgcacc tgtattccca tcccatcacc ttgggctttc 300
 gcaaaa 306

<210> 18
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> HIV-1 mV3

<400> 18
 attaatgtga caagacccaa caacaataga agaagaaggt tatctatagg accagggaga 60
 gcattttatg caagaagaaa cataatagga gatataagac aagcacattg taacattgaa 120
 ttcattaatt gtacaagacc caacaacaat acaagaagaa ggttatctat aggaccaggg 180
 agagcatttt atgcaagaag aaacataata ggagatataa gacaagcaca ttgtaacatt 240

ctgcagatta attgtacaag acccaacaac aatacaagaa gaaggttattc tataggacca 300
 gggagagcat tttatgcaag aagaaacata ataggagata taagacaagc acattgtaac 360
 360

<210> 19
 <211> 240
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> HIV-1 PND8

<400> 19
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 tctataggac cagggagagc attttatgca tctataggac cagggagagc attttatgca 120
 tctataggac cagggagagc attttatgca tctataggac cagggagagc attttatgca 180
 tctataggac cagggagagc attttatgca tctataggac cagggagagc attttatgca 240
 240

<210> 20
 <211> 450
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> OPV-150

<400> 20
 gctaaggccg ttgcagcctg gaccctgaaa gccgctgcag gccaagcctc caccgaaggc 60
 gactgcgggtt gccagccat catcgaggtc gataacgatg ccctaccaa gcgagccagc 120
 aagctcttca gcgaattcga ggtcgataat gaggagccca ctaccgagc ccagaagctc 180
 ttgcctatgt ggcgtatcac ttacaaggac aatgatgcgc caactaagcg cgcattctaa 240
 ctgtgcgtcc gaattctacat gaagcccaag cacgttcgat gtcgggctg tcccgtatt 300
 atcgaagtgg ataacgagc accaaccaaa cgggcatcaa agctggacaa ctaccagtcc 360
 ccatgcgcga tcaacgagca acctaccacc cgtgcgcaaa agtcgctgg gtgcttctat 420
 cagaccgcg tcgtggttc ctacagttgt 450

<210> 21
 <211> 411
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> OPV-137

<400> 21
 ttctaccaga cgcgagtgg tgtcccagac aacgaacagc cgactaccg ggcaggccaa 60
 gccctccaccg aaggcgactg cgggttgcca gccatcatcg aggtcgataa tgagcagccc 120
 actaccgag cccagaagct cttcgccatg tggcgatca cttacaagga caatgatgcg 180
 ccaactaagc gcgcatctaa actgtgcgtc cgaatctaca tgaagccaa gcacgttcga 240
 tgctccggt gtcccgtat tatcgaagt gataacgacg caccaaccaa acgggcatca 300
 aagctggaca actaccagtc cccatgcgcg atcaacgagc aacctaccac ccgtgcgcaa 360
 aagtcgctg ggtgcttcta tcagaccgc gtcgtggttc cctcaggtt t 411

<210> 22
 <211> 396
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> OPV-132

<400> 22
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 gactgcggtt gccagccat catcgaggtc gataatgagc agcccactac ccgagcccag 120
 aagctcttcg ccatgtggcg tatcacttac aaggacaatg atgcgccaac taagcgcgca 180
 tctaaactgt gcgtccgaat ctacatgaag cccaagcacg ttcgatgctc cggtgtccc 240
 gctattatcg aagtggataa cgacgcacca accaaacggg catcaaagct ggacaactac 300
 cagtcccat gcgcgatcaa cgagcaacct accaccgctg cgcaaaagtc cgctgggtgc 360
 ttctatcaga cccgcgtcgt ggttcctca ggttgt 396